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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,449	04/30/2001	Tomio Kondou	64859 CCD	2494

7590 01/30/2002

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EXAMINER

NOTE, JANIS L

ART UNIT	PAPER NUMBER
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1753

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DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/845,449

Applicant(s)

T. KONDOU et

Examiner

J. DOTE

Group Art Unit

1753

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 10/9/01
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-24 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-24 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 294
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

1. The disclosure is objected to because of the following informalities:

The black toner in Toner Manufacturing Example 3 and the black and cyan toners in Example 4 comprise "compound having formula 1-20" as the charge controlling agent. However, the specification does not identify said compound, nor does it provide formula 1-20.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CAR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claims 10 and 11, the recitation "at least three image bearing members" (emphasis added) lacks antecedent basis in the specification. See page 16, lines 23-24, of the specification, which discloses "plural image bearing members."

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph,

as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is transferring the color toner images on the intermediate transfer medium to the receiving member.

Instant claim 1, on which claim 11 depends, requires the formation of a full color image on a receiving member. Instant claim 11 recites forming a full color image on an intermediate transfer medium, but fails to recite the step of transferring the full color image to a receiving member. The specification discloses that the step of transferring the full color image from the intermediate transfer medium to the receiving member is essential in forming a full color image on a receiving member. Instant specification, page 16, lines 19-21. It is not clear how a full color image is formed on a receiving member without said transfer step.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in -

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language.

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purpose of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

(f) he did not himself invent the subject matter sought to be patented.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly

owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 12-22 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 09/434,472 (Application' 472) which has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if published under 35 U.S.C. 122(b) or patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future publication or patenting of the copending application.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

Application'472 discloses a set of color toners that meets the limitations recited in instant claims 12-22. The set comprises a yellow toner, a magenta toner, and a cyan toner, wherein each of the toners comprise a binder resin, a pigment, and a salicylic acid metal complex that meets the limitations recited in instant claims 17 and 18. See Yellow, Magenta, and Cyan toners 1 and 2, at pages 31-38. The yellow toner comprises a benzimidazolone pigment. The magenta toner comprises either Naphthol Carmine F6B or a combination of Naphthol Carmine F6B and Naphthol Carmine FBB. The cyan toner comprises β -copper phthalocyanine pigment. Each of the toners has a melt viscosity that meets the viscosity recited in instant claim 14. Each color toner provides a color image having a haze factor as recited in instant claim 13. The binder resin in the color toners 2 is a polyol. Application'472 teaches that the polyol is the reaction product of an epoxy resin, a dihydric phenol, and either an adduct of dihydric phenol with an alkylene oxide or a glycidyl ether of an adduct of a dihydric phenol with an alkylene oxide. Page 11, lines 1-22. Said polyol resin meets the polyol resin recited in instant claims 15 and 16. Application'472 further teaches that the color toners can be combined with a carrier.

Page 28, line 25-27. Application'472 discloses containers comprising each of said color toners or said developers.

Page 50, lines 18-25.

The recitation "for a non-contact heat fixing method" is a statement of intended use, which does not distinguish the recited composition from the color toners disclosed by Application'472.

9. Claims 12-22 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent 2000-199982 (JP'982), as evidenced by the Japanese Patent Office (JPO) machine-assisted translation.

JP'982 is the Japanese equivalent of Application'472. JP'982 anticipates the claimed invention for the reasons set forth in paragraph 8 above, which is incorporated herein by reference, but for the cites, which are given infra.

(1) Yellow, Magenta, and Cyan toners 1 and 2. Translation, paragraphs 0056 through 0062.

(2) The binder resin. Translation, paragraphs 0028 and 0029.

(3) Carrier. Translation, paragraph 0052

(4) Container. Translation, paragraph 0081.

10. Claims 12-22 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

Application'472 has an inventive entity that differs from the instant application. As discussed in paragraph 8 supra, Application'472 discloses a color toner and a set of color toners that meet the compositional limitations recited in the instant claims. As discussed infra, Application'472 further claims subject matter that meets or renders obvious the color toners recited in the instant claims. In fact, toners in instant Examples 1 and 2 appear to be same as those in Toner Manufacturing Examples 1 and 2 of Application'472. Thus, it is not clear whether the instant inventive entity invented the subject matter recited in the instant claims.

11. Claims 12, 17, 18, 19, 20, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,020,100 (Iwasaki), as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Iwasaki discloses a set of color toners comprising a yellow toner, a magenta toner, and a cyan toner. The color toners comprise a binder resin and a zinc salicylic acid compound that meets the metal complex recited in instant claims 17 and 18. See Example 1 at cols 10-11, Example 13 at cols. 18-19, and col. 9, lines 30-31. The yellow toner comprises Pigment Yellow 180,

which is identified in CA Reg. No. 77804-81-0 as a benzimidazolone pigment. The cyan toner comprises Pigment Blue 15:2, which is identified in CA Reg. No. 147-14-8 as β -copper phthalocyanine. The magenta toner comprises Pigment Red 184. Pigment Red 184 is identified as a commercially available Naphthol AS pigment comprising a mixture of compounds having the chemical formulae disclosed in the instant specification, page 8, as Naphthol Carmine F6B. See Industrial Organic Pigments, Table 18 at page 289. Thus, Pigment Red 184 is Naphthol Carmine F6B. Iwasaki further teaches that the color toners can be used as a mono-component developer, or in a two-component developer comprising a carrier. Col. 9, lines 56-61. Iwasaki discloses an image forming apparatus comprising containers comprising said color toners or developers. Col. 13, lines 33-44.

The recitation "for a non-contact heat fixing method" is a statement of intended use, which does not distinguish the recited composition from the color toners disclosed by Iwasaki.

12. Claims 13 and 14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Iwasaki, as evidenced by Chemical Abstracts (CA)

Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Iwasaki discloses color toners as described in paragraph 11 above, which is incorporated herein by reference. Iwasaki's color toners meet the compositional limitations recited in instant claims 13 and 14. However, Iwasaki does not disclose that the color toners provide a color image having a haze factor as recited in instant claim 13. Nor does Iwasaki disclose that the color toners have a melt viscosity as required in instant claim 14.

The instant specification at page 9, lines 8-16, discloses how to prepare a toner which produces a toner image having a relatively low haze factor. The toner manufacturing method uses a master batch in which a pigment is dispersed in a binder resin in a high content. The specification discloses that the master batch can be prepared preferably by kneading methods in which a pigment is kneaded with a resin using a two-roll or three-roll mill. Iwasaki discloses that his color toners are obtained by using a pigment master batch where the batch is obtained by kneading pigment and binder resin in a weight ratio of 23:54 in a twin-screw kneader. Col. 17, lines 23-43. Iwasaki's method appears to be the same or substantially the same as disclosed in the instant specification. Because Iwasaki's color toners meet the

compositional limitations recited in instant claim 13, and because Iwasaki's color toners appear to be made in the same or substantially the same manner as disclosed in the specification, it is reasonable to presume that Iwasaki's color toners produce color images having the haze factor recited in instant claim 13. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

The instant specification at page 9, lines 17-22, discloses that to obtain color images having good reproducibility, it is important that each of the color toners melts and uniformly mixes with each other when fixed. The specification discloses that it is preferred that the toners have a melt viscosity not greater than 120 mPa·sec at 140°C. Iwasaki discloses that his color toners provide full color images having good color reproducibility. See Table 1, example 1, and Table 3, example 13. Because Iwasaki's color toners meet the compositional limitations recited in instant claim 14, and produce full color images having good color reproducibility, it is reasonable to presume that Iwasaki's color toners have the required melt viscosity recited in instant claim 14. The burden is on applicants to prove otherwise.

13. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289, combined with US 5,554,478 (Kuramoto).

Iwasaki discloses color toners as described in paragraph 11, respectively, above, which is incorporated herein by reference. Iwasaki does not disclose the use of a polyol resin as recited in instant claims 15 and 16. However, Iwasaki does not limit the type of toner binder resin used. Iwasaki discloses that it is desirable that the binder resin have particular melting characteristics so as to enable the toner, as a full color toner, to have good light transmission property and good color reproducibility. Col. 9, lines 1-5.

Kuramoto discloses a polyol binder resin synthesized by reacting (1) an epoxy resin, (2) a dihydric phenol, and (3) either an alkylene oxide adduct of a dihydric phenol or a glycidyl ether thereof. See Synthesis Example 1 at col. 8. Said binder resin meets the polyol recited in instant claims 15 and 16. Kuramoto discloses that color toners comprising said binder resin provide full color images with excellent color reproducibility and uniform glossiness. Col. 3, lines 32-35, and col. 19, lines 14-17. Said color toners also can provide sharp

full color images without muddiness on a transparent film.
Col. 19, line 27-30. Thus, it appears that Kuramoto's polyol resin provides color toners capable of providing full color images having the properties desired by Iwasaki, i.e., good light transmission property and good color reproducibility.

It would have been obvious for a person having ordinary skill in the art to use Kuramoto's toner polyol binder resin as the binder resin in the color toners disclosed by Iwasaki, because that person would have had a reasonable expectation of successfully obtaining color toners that are capable of providing full-color images with good light transmission property, good color reproducibility, and uniform glossiness.

14. Claims 1-7, 10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,969 (Elsermans) combined with JP'982, as evidenced by the JPO translation of JP'982.

Claims 1, 6, 7, 10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsermans combined with Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsermans combined with Iwasaki, as evidenced

by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsermans combined with Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289, and Kuramoto.

Elsermans discloses an image forming method that meets the steps recited in instant claims 1 and 10, but for the particular color toners. Elsermans also discloses an apparatus that meets the components recited in instant claim 23, but for the particular color toners. Elsermans' method comprises the steps of: (1) developing electrostatic images on at least three image bearing members with a yellow toner, a magenta toner, and a cyan toner; (2) transferring in order the yellow, magenta, and cyan color toner images onto a receiving material to form a full color image; (3) non-contact fixing the full color image on the receiving material with radiant energy; and (4) modifying the fixed full color image with a finishing device to achieve a desired gloss. Figs. 1 through 3, col. 8, lines 14-40, col. 9, line 44, to col. 11, line 11, and col. 11, line 61, to col. 12, line 11. The yellow color toner image is formed directly on the receiving material, thus satisfying the requirement that "the

yellow color toner image has a position closer to the receiving material than any other color toner image" recited in instant claim 1. Elsermans' apparatus comprises (1) image forming devices **A**, **B**, and **C** comprising yellow, magenta, and cyan toners, respectively (see Fig. 1); (2) a transferring device **34** to transfer the yellow, magenta, and cyan color toner images to a receiving material (see Fig. 2); (3) a non-contact fixing device **16** (see Fig. 3); and (4) a finishing device **17** (see Fig. 3). Elsermans does not limit the type of toner used in said method or apparatus. Col. 5, lines 59-62.

JP'982 discloses color toners that meet the toner compositional limitations recited in instant claims 1-7, 10, and 23, as discussed in paragraph 9 above, which is incorporated herein by reference. JP'982 further discloses that its color toners are capable of producing a multi-color image having a satisfactorily balance in the red and blue fields, and good light resistance. Translation, paragraph 0004.

Iwasaki discloses color toners that meet the toner compositional limitations recited in instant claims 1, 6, 7, 10, and 23, as discussed in paragraph 11 above, which is incorporated herein by reference. Iwasaki discloses color toners that also appear to meet the toner limitations recited in instant claims 2 and 3, as discussed in paragraph 12 above, which is incorporated

herein by reference. Iwasaki further discloses that his color toners are capable of providing full color images with good color reproducibility and transparency. Col. 1, lines 53-57, and for example, Table 1, example 1.

The combined teachings of Iwasaki and Kuramoto render obvious color toners that meet the compositional limitations recited in instant claims 4 and 5. The discussion of Iwasaki and Kuramoto in paragraph 13 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use JP'982's color toners, Iwasaki's color toners, or the color toners rendered obvious over the combined teachings of Iwasaki and Kuramoto, in Elsermans' image forming method and apparatus, because that person would have had a reasonable expectation of successfully obtaining an image forming method and apparatus that are capable of providing full color images on a receiving material with a desired gloss and having the benefits disclosed by JP'982 or by Iwasaki, or by the combined teachings of Iwasaki and Kuramoto.

15. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,593,991 (Aoki) combined with US 5,521,688

(Moser) and JP'982, as evidenced by the JPO translation of JP'982.

Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki combined with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki combined with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki combined with Moser; Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289; and Kuramoto.

Aoki discloses a method of forming a full color image comprising the steps recited in instant claims 1 and 8, but for the non-contacting fixing step and the color toners. Aoki's method comprises the steps of: (1) developing an electrostatic image on an image bearing member with a yellow toner; (2) transferring the yellow toner image onto a receiving

material; (3) repeating steps (1) and (2) using in order the magenta and cyan toners to form a full color toner image on the receiving material; and (4) fixing the full color toner image on the receiving material. Fig. 1, and col. 2, line 28, to col. 3, line 5, and col. 4, lines 8-30. The yellow color toner image is formed directly on the receiving material, thus satisfying the requirement that "the yellow color toner image has a position closer to the receiving material than any other color toner image" recited in instant claim 1. Aoki does not limit the type of fixing device used. Col. 3, lines 3-5.

Moser discloses a fixing method and apparatus for fixing color images on a receiving material. The method comprises the steps of non-contact fixing the color images on a receiving material by heating the member in an oven 76, and passing the fixed color images through a nip 90 formed by a pair of glossing rolls 78 and 80 to produce a desired uniform gloss in the color images. Col. 5, lines 27-61, and Fig. 1. Moser discloses that said method and fixing apparatus provides fixed color images that exhibit uniform gloss and satisfactory color saturation properties. Col. 1, lines 5-9. Moser discloses that his method and fixing apparatus can be used in a wide variety of printing methods and machines. Col. 4, lines 1-5. According to Moser, the glossing rollers are operated at substantially lower

temperatures than conventional fusing rollers, which results in longer life and reliability compared to conventional fusing rollers. Col. 1, lines 57-61, and col. 3, lines 32-35. Moser also discloses that the glossing rollers are significantly smaller in size than conventional heated fusing rollers, resulting in cost savings. Col. 3, lines 36-40.

It would have been obvious for a person having ordinary skill in the art to use Moser's method of fixing color images to the receiving member in the method disclosed by Aoki, because that person would have had a reasonable expectation of successfully obtaining a cost-effective and reliable image forming method that can be repeatably used for a long time and is capable of proving full color images having satisfactory color saturation properties and a desired uniform gloss.

Neither Aoki nor Moser limit the type of color toners used.

JP'982 discloses color toners that meet the toner compositional limitations recited in instant claims 1-8, as discussed in paragraph 9 above, which is incorporated herein by reference. JP'982 further discloses that its color toners are capable of producing a multi-color image having a satisfactorily balance in the red and blue fields, and good light resistance. Translation, paragraph 0004.

Iwasaki discloses color toners that meet the toner compositional limitations recited in instant claims 1 and 6-8, as discussed in paragraph 11 above, which is incorporated herein by reference. Iwasaki discloses color toners that also appear to meet the toner limitations recited in instant claims 2 and 3, as discussed in paragraph 12 above, which is incorporated herein by reference. Iwasaki further discloses that his color toners are capable of providing full color images with good color reproducibility and transparency. Col. 1, lines 53-57, and for example, Table 1, example 1.

The combined teachings of Iwasaki and Kuramoto render obvious color toners that meet the compositional limitations recited in instant claims 4 and 5. The discussion of Iwasaki and Kuramoto in paragraph 13 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use JP'982's color toners, Iwasaki's color toners, or the color toners rendered obvious over the combined teachings of Iwasaki and Kuramoto, in the image forming method rendered obvious over the combined teachings of Aoki and Moser, because that person would have had a reasonable expectation of successfully obtaining a cost effective and reliable image forming method that is capable of providing full color images

having the benefits disclosed by JP'982 or by Iwasaki, or by the combined teachings of Iwasaki and Kuramoto.

16. Claims 1-7, 9, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,442,428 (Takahashi) combined with Moser and JP'982, as evidenced by the JPO translation of JP'982.

Claims 1, 6, 7, 9, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi combined with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi combined with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi combined with Moser; Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289; and Kuramoto.

Takahashi discloses a method of forming a full color image comprising the steps recited in instant claims 1 and 9, but for the non-contacting fixing step and the color toners. Takahashi also discloses an apparatus that meets the components recited in instant claims 23 and 24, but for the non-contact fixing device and the particular color toners. Takahashi's method comprises the steps of: (1) developing an electrostatic image on an image bearing member with a cyan toner, (2) transferring the cyan toner image onto an intermediate transfer medium; (3) repeating steps (1) and (2) using in order the magenta and yellow toners to form a full color toner image on the transfer medium; (4) transferring the full color image on the intermediate transfer medium to a receiving material; and (5) fixing the full color toner image on the receiving material. Fig. 2, and col. 3, line 47, to col. 5, line 53. Because the yellow color toner image is last one formed on the intermediate transfer medium, it is formed as the image closer to the receiving material than any other color toner image, and it thus meets the limitation recited in instant claim 1. Takahashi's apparatus comprises (1) image forming device 9, (2) developing units 15, 16, and 17 comprising cyan, magenta, and yellow toners, respectively, and (3) an image transfer device comprising an intermediate transfer medium 19.

See Fig. 2. Takahashi discloses that the fixing is accomplished by a pair of fixing rollers. Col. 5, lines 55-58.

Moser discloses a non-contact fixing method and apparatus for fixing color images on a receiving material. Moser discloses that said method and fixing apparatus provides fixed color images that exhibit uniform gloss and satisfactory color saturation properties. Moser also discloses the benefits of using said method and apparatus compared to conventional fixing rollers. The discussion of Moser in paragraph 15 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use Moser's apparatus and method of fixing color images to the receiving member in the apparatus and method disclosed by Takahashi, because that person would have had a reasonable expectation of successfully obtaining a cost-effective and reliable image forming apparatus and method that can be repeatably used for a long time and are capable of providing full color images having satisfactory color saturation properties and a desired uniform gloss.

Neither Takahashi nor Moser limit the type of color toners used.

JP'982 discloses color toners that meet the toner compositional limitations recited in instant claims 1-7, 9, 23, and 24, as discussed in paragraph 9 above, which is incorporated herein by reference. JP'982 further discloses that its color toners are capable of producing a multi-color image having a satisfactorily balance in the red and blue fields, and good light resistance. Translation, paragraph 0004.

Iwasaki discloses color toners that meet the toner compositional limitations recited in instant claims 1, 6, 7, 9, 23, and 24, as discussed in paragraph 11 above, which is incorporated herein by reference. Iwasaki discloses color toners that also appear to meet the toner limitations recited in instant claims 2 and 3, as discussed in paragraph 12 above, which is incorporated herein by reference. Iwasaki further discloses that his color toners are capable of providing full color images with good color reproducibility and transparency. Col. 1, lines 53-57, and for example, Table 1, example 1.

The combined teachings of Iwasaki and Kuramoto render obvious color toners that meet the compositional limitations recited in instant claims 4 and 5. The discussion of Iwasaki and Kuramoto in paragraph 13 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use JP'982's color toners, Iwasaki's color toners, or the color toners rendered obvious over the combined teachings of Iwasaki and Kuramoto, in the apparatus and image forming method rendered obvious over the combined teachings of Takahashi and Moser, because that person would have had a reasonable expectation of successfully obtaining a cost effective and reliable image forming apparatus and method that are capable of providing full color images having the benefits disclosed by JP'982 or by Iwasaki, or by the combined teachings of Iwasaki and Kuramoto.

17. Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,188,418 B1 (Hata) combined with Moser and JP'982, as evidenced by the JPO translation of JP'982.

Claims 1, 6, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hata combined with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined Hata with Moser and Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0

and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined Hata with Moser; Iwasaki, as evidenced by Chemical Abstracts (CA) Registry Numbers 77804-81-0 and 147-14-8, and Industrial Organic Pigments, Table 18 at page 289; and Kuramoto.

Hata discloses a method of forming a full color image comprising the steps recited in instant claims 1 and 11, but for the non-contacting fixing step and the color toners. Hata's method comprises the steps of: (1) developing electrostatic images on at least three image bearing members with a cyan toner, a magenta toner, and a yellow toner; (2) transferring in order the cyan, magenta, and yellow color toner images onto an intermediate transfer medium 7 to form a full color image; (3) transferring the full color image on the intermediate transfer medium to a receiving material; and (4) fixing the full color image on the receiving material. Fig. 1, and col. 7, lines 63-67, which discloses that the elements in Fig. 1 are the same as in Fig. 8 (which is described at col. 1, line 51, to col. 3, line 3), except for a conveying drawing fluctuation period detector 71 and a registration pattern generator 72 are added. Because the yellow color toner image is last color image

formed on the intermediate transfer medium, it is formed as the color image closer to the receiving material than any other two color toner images, which meets the limitation recited in instant claim 1. Hata discloses that the fixing is accomplished by a pair of fixing rollers 12. See Fig. 1.

Moser discloses a non-contact fixing method and apparatus for fixing color images on a receiving material. Moser discloses that said method and fixing apparatus provides fixed color images that exhibit uniform gloss and satisfactory color saturation properties. Moser also discloses the benefits of using said method and apparatus compared to conventional fixing rollers. The discussion of Moser in paragraph 15 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use Moser's method of fixing color images to the receiving member in the method disclosed by Hata, because that person would have had a reasonable expectation of successfully obtaining a cost-effective and reliable image forming method that can be repeatably used for a long time and is capable of proving full color images having satisfactory color saturation properties and a desired uniform gloss.

Neither Hata nor Moser limit the type of color toners used.

JP'982 discloses color toners that meet the toner compositional limitations recited in instant claims 1-7 and 11 as discussed in paragraph 9 above, which is incorporated herein by reference. JP'982 further discloses that its color toners are capable of producing a multi-color image having a satisfactorily balance in the red and blue fields, and good light resistance. Translation, paragraph 0004.

Iwasaki discloses color toners that meet the toner compositional limitations recited in instant claims 1, 6, 7, and 11, as discussed in paragraph 11 above, which is incorporated herein by reference. Iwasaki discloses color toners that also appear to meet the toner limitations recited in instant claims 2 and 3, as discussed in paragraph 12 above, which is incorporated herein by reference. Iwasaki further discloses that his color toners are capable of providing full color images with good color reproducibility and transparency. Col. 1, lines 53-57, and for example, Table 1, example 1.

The combined teachings of Iwasaki and Kuramoto render obvious color toners that meet the compositional limitations recited in instant claims 4 and 5. The discussion of Iwasaki and Kuramoto in paragraph 13 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use JP'982's color toners, Iwasaki's color toners, or the color toners rendered obvious over the combined teachings of Iwasaki and Kuramoto, in the image forming method rendered obvious over the combined teachings of Hata and Moser, because that person would have had a reasonable expectation of successfully obtaining a cost effective and reliable image forming method that is capable of providing full color images having the benefits disclosed by JP'982 or by Iwasaki, or by the combined teachings of Iwasaki and Kuramoto.

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional

rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

19. Claims 12-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5-17, 20, 22, and 24-28 of copending Application No. 09/434,472 (Application'472). Although the conflicting claims are not identical, they are not patentably distinct from each other because Application No. 09/434,472 claims a set of color toners comprising a yellow toner, a magenta toner, and a cyan toner, wherein each of the toners has a melt viscosity that meets the viscosity recited in instant claim 14. See reference claims 1 and 20. The yellow toner comprises a benzimidazolone pigment. The magenta toner comprises either Naphthol Carmine F6B or a combination of Naphthol Carmine F6B and Naphthol Carmine FBB. The cyan toner comprises β -copper phthalocyanine pigment. See reference claims 2, 20, 22. Reference claim 3 recites that the toners provide a haze factor as recited in instant claim 13. Reference claims 5 and 6 recite

that the toners comprise a polyol binder resin that meets the polyol resin recited in instant claims 15 and 16. Reference claims 12-15 recite that the toners further comprise an aromatic hydroxycarboxylic acid charge control agent that meets the limitations recited in instant claims 17 and 18. Reference claims 25 and 26 recite developers comprising said color toners and a carrier. Reference claims 27 and 28 recite a color copier comprising said set of color toners. The examiner takes Official Notice that it is well-known in the art that color copiers comprise containers to hold the individual color toners or developers.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter recited in Application'472, to make and use a set of color toners and containers comprising said color toners that meet the limitations of the instant claims, because that person would have had a reasonable expectation of successfully obtaining a set of color toners and containers comprising said color toners that can be used in a color copier to form full color images.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (703) 308-3625. The examiner can normally be reached Monday through Friday.

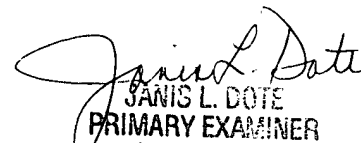
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be

reached on (703) 308-3322. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9311 (Rightfax) for after final faxes, and (703) 305-7718 for other official faxes.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Alva Catlett, whose telephone number is (703) 308-1100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JLD
January 27, 2002


JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700